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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,677	05/15/2001	Hideyuki Yano	35.C15360	8069

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EXAMINER

GRAINGER, QUANA MASHELL

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/854677

Applicant(s)

Yano

Examiner

Q. Granger

Group Art Unit

2852

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) filed on 3-27-3
- ☐ This action is FINAL
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1, 4-5, 7-25 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☒ Claim(s) 14-25 is/are allowed.
- ☒ Claim(s) 1, 5, 7-13 is/are rejected.
- ☒ Claim(s) 4 is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1 and 11-13 are rejected under 35 U.S.C. 102(a) as being anticipated by Hayashi et al. (JP2001-117390A). The image forming apparatus by Hayashi et al. comprises an image bearing member (100 or 101) for bearing a toner image; a conveying member (110) for bearing and conveying a recording material; and a transferring member (105) for transferring a toner image on said image bearing member to the recording material conveyed by said conveying member by being applied a voltage, wherein said transferring member has ion conductivity (abstract). A number of said image bearing members and the number of said transferring member are plural respectively, corresponding to plural color toners, and said image bearing member and said transferring member oppose each other via said conveying member. The plural image bearing members and said plural transferring members are arranged in a conveying direction of said conveying material, and plural color toner images are transferred on a recording material one after another by a conveyance of said conveying member. The conveying member has an endless shape.

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, ~~4~~5, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Imamiya. Nakamura teaches an image forming apparatus comprising an image bearing member for bearing a toner image; and a transferring member for transferring a toner image on said image bearing member to the recording material conveyed by said conveying member by being applied a voltage, wherein said transferring member has ion conductivity. The transferring member is above the transfer sheet and does not convey the sheet. Nakamura does not teach a conveying member for bearing and conveying a recording material.

Imamiya teaches an image forming apparatus comprising an image bearing member for bearing a toner image; a conveying member for bearing and conveying a recording material; and a transferring member for transferring a toner image on said image bearing member to the recording material conveyed by said conveying member by being applied a voltage. The image forming apparatus, further comprising developing means for developing a latent image on said

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image bearing member by a reversal developing method (column 4, lines 37-49). The transferring member has a sponge at least on surface thereof (column 6, lines: 16-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of Imamiya with the image forming device of Nakamura to always obtain a substantially uniform electric field at the transfer nip (Imamiya; purpose: lines 1-6)

5. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura in view of Imamiya and further in view of Ogawahara et al. Nakamura does not teach a double-sided mode.

Ogawahara et al. teaches an image forming apparatus wherein said image forming apparatus has a double-side mode for forming images on both sides of a recording material. The image forming apparatus has a resin mode for forming an image on a recording material made of resin and the recording material made of resin has light permeability (column 11, lines 23-37). The image forming apparatus, further comprising developing means for developing a latent image on said image bearing member by a reversal developing method (column 6, lines 50-66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of Ogawahara et al. with the image forming device of Nakamura to always obtain good fixing performance (Ogawahara et al.; column 3, lines 59-67).

#### ***Prior Art of Record***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yano (JP2001-324883) teaches an inline system image forming device having transfer roller having ion conductivity.

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*Allowable Subject Matter*

7. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 4 recites an image forming apparatus according to claim 1, wherein a surface roughness of said transferring member is at least 10 microns.
8. Claims 14-25 are allowed. Claim 14 recites an image forming apparatus comprising an image bearing member for bearing a toner image; a conveying member for bearing and conveying a recording material; and a transferring member for transferring a toner image on said image bearing member to the recording material conveyed by said conveying member by being applied to a voltage; wherein said transferring member has ion conductivity, and a change in a resistance value of said transferring member under a voltage of 1000 to 3000 v applied to said transferring member is within one digit. Claim 15 recites an image forming apparatus comprising an image bearing member for bearing a toner image; a conveying member for bearing and conveying a recording material; and a transferring member for transferring a toner image on said image bearing member to the recording material conveyed by said conveying member by being applied to voltage; wherein said transferring member has ion conductivity, and a resistance value of said transferring member under a voltage of 1000 V applied to said transferring member is  $10^7$  to  $10^9$  ohms. Claim 16 recites an image forming apparatus comprising an image bearing member for bearing a toner image; a conveying member for bearing and conveying a recording material; and a transferring member for transferring a toner image on said image bearing member to the recording material conveyed by said conveying member by being applied to a voltage;

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wherein each of said transferring member and said conveying member has ion conductivity.

*Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quana Grainger whose telephone number is 703-308-7616. The examiner can normally be reached on weekdays between the hours of 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 703-308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.



Quana Grainger  
Primary Examiner  
Art Unit 2852

QG  
June 12, 2003